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<110> Walke, D. Wade
Scoville, John

<120> Novel Human Membrane Proteins and Polynucleotides Encoding the Same

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<150> US 60/237,280

<151> 2000-10-02

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Ser Arg Thr Phe Pro His Gly Asn Asn His Ser Phe Ser Thr Met His					
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Pro Arg Asn Lys Met Pro Tyr Ile Gln Asn Leu Ser Ser Leu Pro Thr					
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Arg Thr Glu Leu Arg Thr Thr Gly Val Phe Gly His Leu Gly Gly Arg					
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Leu Val Met Pro Asn Thr Gly Val Ser Leu Leu Ile Pro His Gly Ala					
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Ile Pro Glu Glu Asn Ser Trp Glu Ile Tyr Met Ser Ile Asn Gln Gly					
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Glu Pro Ser Glu Asn Pro Ala Asn Lys Gly Ser Asn Ser Leu Leu Lys					
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 Ala Pro Gly Thr Leu Pro His Phe Ile Glu Glu Pro Asp Asp Ala Tyr
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 Ile Ile Lys Ser Asn Pro Ile Ala Leu Arg Cys Lys Ala Arg Pro Ala
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 Met Gln Ile Phe Phe Lys Cys Asn Gly Glu Trp Val His Gln Asn Glu
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 Glu Val Phe Ile Asn Val Thr Arg Gln Gln Val Glu Asp Phe His Gly
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 Pro Glu Asp Tyr Trp Cys Gln Cys Val Ala Trp Ser His Leu Gly Thr
 130 135 140
 Ser Lys Ser Arg Lys Ala Ser Val Arg Ile Ala Tyr Leu Arg Lys Asn
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 Phe Glu Gln Asp Pro Gln Gly Arg Glu Val Pro Ile Glu Gly Met Ile
 165 170 175
 Val Leu His Cys Arg Pro Pro Glu Gly Val Pro Ala Ala Glu Val Glu
 180 185 190
 Trp Leu Lys Asn Glu Glu Pro Ile Asp Ser Glu Gln Asp Glu Asn Ile
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 Asp Thr Arg Ala Asp His Asn Leu Ile Ile Arg Gln Ala Arg Leu Ser
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 Glu Gly Leu Ser Gln Glu Ser Glu Asn Cys Thr Asp Gly Leu Cys Ile
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 Asp Tyr Gly Val Asp Val Ile Asp Ser Ser Ala Leu Thr Gly Gly Phe

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<210> 8
<211> 552
<212> PRT
<213> homo sapiens

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Ala Arg Gly Thr Asp Asn Gly Glu Ala Leu Pro Glu Ser Ile Pro Ser
35     40     45
Ala Pro Gly Thr Leu Pro His Phe Ile Glu Glu Pro Asp Asp Ala Tyr
50     55     60
Ile Ile Lys Ser Asn Pro Ile Ala Leu Arg Cys Lys Ala Arg Pro Ala
65     70     75     80
Met Gln Ile Phe Phe Lys Cys Asn Gly Glu Trp Val His Gln Asn Glu
85     90     95
His Val Ser Glu Glu Thr Leu Asp Glu Ser Ser Gly Leu Lys Val Arg
100    105    110
Glu Val Phe Ile Asn Val Thr Arg Gln Gln Val Glu Asp Phe His Gly
115    120    125
Pro Glu Asp Tyr Trp Cys Gln Cys Val Ala Trp Ser His Leu Gly Thr
130    135    140
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145    150    155    160
Phe Glu Gln Asp Pro Gln Gly Arg Glu Val Pro Ile Glu Gly Met Ile
165    170    175
Val Leu His Cys Arg Pro Pro Glu Gly Val Pro Ala Ala Glu Val Glu
180    185    190
Trp Leu Lys Asn Glu Glu Pro Ile Asp Ser Glu Gln Asp Glu Asn Ile
195    200    205
Asp Thr Arg Ala Asp His Asn Leu Ile Ile Arg Gln Ala Arg Leu Ser
210    215    220
Asp Ser Gly Asn Tyr Thr Cys Met Ala Ala Asn Ile Val Ala Lys Arg
225    230    235    240
Arg Ser Leu Ser Ala Thr Val Val Val Tyr Val Asp Gly Ser Trp Glu
245    250    255
Val Trp Ser Glu Trp Ser Val Cys Ser Pro Glu Cys Glu His Leu Arg
260    265    270
Ile Arg Glu Cys Thr Ala Pro Pro Pro Arg Asn Gly Gly Lys Phe Cys
275    280    285
Glu Gly Leu Ser Gln Glu Ser Glu Asn Cys Thr Asp Gly Leu Cys Ile
290    295    300
Leu Gly Ile Glu Asn Ala Ser Asp Ile Ala Leu Tyr Ser Gly Leu Gly
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Ala Ala Val Val Ala Val Ala Val Leu Val Ile Gly Val Thr Leu Tyr
325    330    335
Arg Arg Ser Gln Ser Asp Tyr Gly Val Asp Val Ile Asp Ser Ser Ala

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Asn Ser Leu Leu Leu Asn Ser Ala Met Gln Pro Asp Leu Thr Val Ser		
370	375	380
Arg Thr Tyr Ser Gly Pro Ile Cys Leu Gln Asp Pro Leu Asp Lys Glu		
385	390	395
Leu Met Thr Glu Ser Ser Leu Phe Asn Pro Leu Ser Asp Ile Lys Val		
405	410	415
Lys Val Gln Ser Ser Phe Met Val Ser Leu Gly Val Ser Glu Arg Ala		
420	425	430
Glu Tyr His Gly Lys Asn His Ser Arg Thr Phe Pro His Gly Asn Asn		
435	440	445
His Ser Phe Ser Thr Met His Pro Arg Asn Lys Met Pro Tyr Ile Gln		
450	455	460
Asn Leu Ser Ser Leu Pro Thr Arg Thr Glu Leu Arg Thr Thr Gly Val		
465	470	475
Phe Gly His Leu Gly Arg Leu Val Met Pro Asn Thr Gly Val Ser		
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Leu Leu Ile Pro His Gly Ala Ile Pro Glu Glu Asn Ser Trp Glu Ile		
500	505	510
Tyr Met Ser Ile Asn Gln Gly Glu Pro Ser Glu Asn Pro Ala Asn Lys		
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<211> 2736

<212> DNA

<213> homo sapiens

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<210> 10

<211> 911

<212> PRT

<213> homo sapiens

<400> 10

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Ala Arg Gly Thr Asp Asn Gly Glu Ala Leu Pro Glu Ser Ile Pro Ser
35          40          45
Ala Pro Gly Thr Leu Pro His Phe Ile Glu Glu Pro Asp Asp Ala Tyr
50          55          60
Ile Ile Lys Ser Asn Pro Ile Ala Leu Arg Cys Lys Ala Arg Pro Ala
65          70          75          80
Met Gln Ile Phe Phe Lys Cys Asn Gly Glu Trp Val His Gln Asn Glu
85          90          95
His Val Ser Glu Glu Thr Leu Asp Glu Ser Ser Gly Leu Lys Val Arg
100         105         110
Glu Val Phe Ile Asn Val Thr Arg Gln Gln Val Glu Asp Phe His Gly
115         120         125
Pro Glu Asp Tyr Trp Cys Gln Cys Val Ala Trp Ser His Leu Gly Thr
130         135         140
Ser Lys Ser Arg Lys Ala Ser Val Arg Ile Ala Tyr Leu Arg Lys Asn
145         150         155         160
Phe Glu Gln Asp Pro Gln Gly Arg Glu Val Pro Ile Glu Gly Met Ile
165         170         175
Val Leu His Cys Arg Pro Pro Glu Gly Val Pro Ala Ala Glu Val Glu
180         185         190
Trp Leu Lys Asn Glu Glu Pro Ile Asp Ser Glu Gln Asp Glu Asn Ile

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Arg	Ser	Leu	Ser	Ala	Thr	Val	Val	Val	Tyr	Val	Asp	Gly	Ser	Trp	Glu
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Leu	Asp	Lys	Lys	Pro	Leu	His	Glu	Ile	Lys	Pro	Gln	Ser	Ile	Glu	Asn
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Ala	Ser	Asp	Ile	Ala	Leu	Tyr	Ser	Gly	Leu	Gly	Ala	Ala	Val	Val	Ala
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Asp	Tyr	Gly	Val	Asp	Val	Ile	Asp	Ser	Ser	Ala	Leu	Thr	Gly	Gly	Phe
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Gln	Thr	Phe	Asn	Phe	Lys	Thr	Val	Arg	Gln	Ala	Lys	Asn	Ile	Met	Glu
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Ala	Met	Gln	Pro	Asp	Leu	Thr	Val	Ser	Arg	Thr	Tyr	Ser	Gly	Pro	Ile
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Cys	Leu	Gln	Asp	Pro	Leu	Asp	Lys	Glu	Leu	Met	Thr	Glu	Ser	Ser	Leu
			420					425					430		
Phe	Asn	Pro	Leu	Ser	Asp	Ile	Lys	Val	Lys	Val	Gln	Ser	Ser	Phe	Met
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Val	Ser	Leu	Gly	Val	Ser	Glu	Arg	Ala	Glu	Tyr	His	Gly	Lys	Asn	His
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Ser	Arg	Thr	Phe	Pro	His	Gly	Asn	Asn	His	Ser	Phe	Ser	Thr	Met	His
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Pro	Arg	Asn	Lys	Met	Pro	Tyr	Ile	Gln	Asn	Leu	Ser	Ser	Leu	Pro	Thr
				485					490					495	
Arg	Thr	Glu	Leu	Arg	Thr	Thr	Gly	Val	Phe	Gly	His	Leu	Gly	Gly	Arg
			500					505					510		
Leu	Val	Met	Pro	Asn	Thr	Gly	Val	Ser	Leu	Leu	Ile	Pro	His	Gly	Ala
		515					520					525			
Ile	Pro	Glu	Glu	Asn	Ser	Trp	Glu	Ile	Tyr	Met	Ser	Ile	Asn	Gln	Gly
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Glu	Pro	Ser	Leu	Gln	Ser	Asp	Gly	Ser	Glu	Val	Leu	Leu	Ser	Pro	Glu
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<210> 12
 <211> 900
 <212> PRT
 <213> homo sapiens

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Ala Arg Gly Thr Asp Asn Gly Glu Ala Leu Pro Glu Ser Ile Pro Ser
 35           40           45
Ala Pro Gly Thr Leu Pro His Phe Ile Glu Glu Pro Asp Asp Ala Tyr
 50           55           60
Ile Ile Lys Ser Asn Pro Ile Ala Leu Arg Cys Lys Ala Arg Pro Ala
 65           70           75           80
Met Gln Ile Phe Phe Lys Cys Asn Gly Glu Trp Val His Gln Asn Glu
 85           90           95
His Val Ser Glu Glu Thr Leu Asp Glu Ser Ser Gly Leu Lys Val Arg
100          105          110
Glu Val Phe Ile Asn Val Thr Arg Gln Gln Val Glu Asp Phe His Gly
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Pro Glu Asp Tyr Trp Cys Gln Cys Val Ala Trp Ser His Leu Gly Thr
130          135          140
Ser Lys Ser Arg Lys Ala Ser Val Arg Ile Ala Tyr Leu Arg Lys Asn

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Trp	Leu	Lys	Asn	Glu	Glu	Pro	Ile	Asp	Ser	Glu	Gln	Asp	Glu	Asn
		195					200					205		
Asp	Thr	Arg	Ala	Asp	His	Asn	Leu	Ile	Ile	Arg	Gln	Ala	Arg	Leu
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Asp	Ser	Gly	Asn	Tyr	Thr	Cys	Met	Ala	Ala	Asn	Ile	Val	Ala	Lys
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Arg	Ser	Leu	Ser	Ala	Thr	Val	Val	Val	Tyr	Val	Asp	Gly	Ser	Trp
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Val	Trp	Ser	Glu	Trp	Ser	Val	Cys	Ser	Pro	Glu	Cys	Glu	His	Leu
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Ile	Arg	Glu	Cys	Thr	Ala	Pro	Pro	Pro	Arg	Asn	Gly	Gly	Lys	Phe
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Ala	Ala	Val	Val	Ala	Val	Ala	Val	Leu	Val	Ile	Gly	Val	Thr	Leu
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	385			390					395					400
Tyr	Ser	Gly	Pro	Ile	Cys	Leu	Gln	Asp	Pro	Leu	Asp	Lys	Glu	Leu
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Thr	Glu	Ser	Ser	Leu	Phe	Asn	Pro	Leu	Ser	Asp	Ile	Lys	Val	Lys
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Thr	Pro	Phe	Ala	Leu	Thr	Ile	Pro	His	Cys	Ala	Asp	Val	Ser	Ser
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Pro	Tyr Ser	Ile Arg	Gln Arg	Ile Cys	Ala Thr	Phe Asp Thr Pro Asn
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Ala	Lys Gly	Lys Asp	Trp Gln	Met Leu	Ala Gln	Lys Asn Ser Ile Asn
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<211> 2694

<212> DNA

<213> homo sapiens

<400> 13

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<211> 897

<212> PRT

<213> homo sapiens

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Val Val Tyr Val Asp Gly Ser Trp Glu Val Trp Ser Glu Trp Ser Val
 20          25          30
Cys Ser Pro Glu Cys Glu His Leu Arg Ile Arg Glu Cys Thr Ala Pro
 35          40          45
Pro Pro Arg Asn Gly Gly Lys Phe Cys Glu Gly Leu Ser Gln Glu Ser
 50          55          60
Glu Asn Cys Thr Asp Gly Leu Cys Ile Leu Asp Lys Lys Pro Leu His
 65          70          75          80
Glu Ile Lys Pro Gln Ser Ile Glu Asn Ala Ser Asp Ile Ala Leu Tyr
 85          90          95
Ser Gly Leu Gly Ala Ala Val Val Ala Val Ala Val Leu Val Ile Gly
100          105          110
Val Thr Leu Tyr Arg Arg Ser Gln Ser Asp Tyr Gly Val Asp Val Ile
115          120          125
Asp Ser Ser Ala Leu Thr Gly Gly Phe Gln Thr Phe Asn Phe Lys Thr
130          135          140
Val Arg Gln Ala Lys Asn Ile Met Glu Leu Met Ile Gln Glu Lys Ser
145          150          155          160
Phe Gly Asn Ser Leu Leu Leu Asn Ser Ala Met Gln Pro Asp Leu Thr
165          170          175
Val Ser Arg Thr Tyr Ser Gly Pro Ile Cys Leu Gln Asp Pro Leu Asp
180          185          190
Lys Glu Leu Met Thr Glu Ser Ser Leu Phe Asn Pro Leu Ser Asp Ile
195          200          205
Lys Val Lys Val Gln Ser Ser Phe Met Val Ser Leu Gly Val Ser Glu
210          215          220
Arg Ala Glu Tyr His Gly Lys Asn His Ser Arg Thr Phe Pro His Gly
225          230          235          240
Asn Asn His Ser Phe Ser Thr Met His Pro Arg Asn Lys Met Pro Tyr
245          250          255
Ile Gln Asn Leu Ser Ser Leu Pro Thr Arg Thr Glu Leu Arg Thr Thr

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	260		265		270
Gly Val Phe Gly His Leu Gly Gly Arg Leu Val Met Pro Asn Thr Gly					
	275		280		285
Val Ser Leu Leu Ile Pro His Gly Ala Ile Pro Glu Glu Asn Ser Trp					
	290		295		300
Glu Ile Tyr Met Ser Ile Asn Gln Gly Glu Pro Ser Glu Asn Pro Ala					
305		310		315	320
Asn Lys Gly Ser Asn Ser Leu Leu Lys Asn Thr Tyr Ala Ile Gly Gly					
	325		330		335
Lys Ile Ser Arg His Leu Gly Ser Ser Arg					
	340		345		

<210> 19
 <211> 1008
 <212> DNA
 <213> homo sapiens

<400> 19

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cggatccggg	agtgcacagc	accacccccg	agaaatgggg	gcaaattctg	tgaagggtcta	180
agccaggaat	ctgaaaactg	cacagatggg	ctttgcatcc	taggcattga	gaatgccagc	240
gacattgctt	tgtactcggg	cttgggtgct	gccgtcgtgg	ccgttgcagt	cctgggtcatt	300
gggtgtcacc	tttacagacg	gagccagagt	gactatggcg	tggacgtcat	tgactcttct	360
gcattgacag	gtggcctcca	gaccttcaac	ttcaaaacag	tccgtcaagc	caagaatatc	420
atggaactaa	tgataacaaga	aaaatccttt	ggtaactccc	tgctcctgaa	ttctgccatg	480
cagccagatc	tgacagttag	ccggacatac	agcggaccca	tctgtctgca	ggaccctctg	540
gacaaggagc	tcattgacaga	gtcctcactc	tttaaccett	tgctcggacat	caaagtga	600
gtccagagct	cggttcattg	ttccctggga	gtgtctgaga	gagctgagta	ccacggcaag	660
aatcattcca	ggacttttcc	ccatggaaac	aaccacagct	ttagtacaat	gcacccaga	720
aataaaatgc	cctacatcca	aaatctgtca	tcactcccca	caaggacaga	actgaggaca	780
actggtgtct	ttggccattt	agggggggcg	ttagtaatgc	caaatacagg	ggtgagctta	840
ctcataccac	acggtgccat	cccagaggag	aattcttggg	agatttatat	gtccatcaac	900
caaggtgaac	ccagtga	aaa	tccagcaa	aac	aaaggatcaa	960
tatgccattg	ggggaaaaat	aagcagacat	ctgggttctt	ctcgtga		1008

<210> 20
 <211> 335
 <212> PRT
 <213> homo sapiens

<400> 20

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Val	Val	Tyr	Val	Asp	Gly	Ser	Trp	Glu	Val	Trp	Ser	Glu	Trp	Ser	Val
			20					25					30		
Cys	Ser	Pro	Glu	Cys	Glu	His	Leu	Arg	Ile	Arg	Glu	Cys	Thr	Ala	Pro
		35					40					45			
Pro	Pro	Arg	Asn	Gly	Gly	Lys	Phe	Cys	Glu	Gly	Leu	Ser	Gln	Glu	Ser
	50					55					60				
Glu	Asn	Cys	Thr	Asp	Gly	Leu	Cys	Ile	Leu	Gly	Ile	Glu	Asn	Ala	Ser
65				70						75				80	
Asp	Ile	Ala	Leu	Tyr	Ser	Gly	Leu	Gly	Ala	Ala	Val	Val	Ala	Val	Ala
			85					90					95		
Val	Leu	Val	Ile	Gly	Val	Thr	Leu	Tyr	Arg	Arg	Ser	Gln	Ser	Asp	Tyr
			100				105						110		

Gly	Val	Asp	Val	Ile	Asp	Ser	Ser	Ala	Leu	Thr	Gly	Gly	Phe	Gln	Thr
	115						120					125			
Phe	Asn	Phe	Lys	Thr	Val	Arg	Gln	Ala	Lys	Asn	Ile	Met	Glu	Leu	Met
	130					135					140				
Ile	Gln	Glu	Lys	Ser	Phe	Gly	Asn	Ser	Leu	Leu	Leu	Asn	Ser	Ala	Met
145					150					155					160
Gln	Pro	Asp	Leu	Thr	Val	Ser	Arg	Thr	Tyr	Ser	Gly	Pro	Ile	Cys	Leu
			165					170						175	
Gln	Asp	Pro	Leu	Asp	Lys	Glu	Leu	Met	Thr	Glu	Ser	Ser	Leu	Phe	Asn
		180						185					190		
Pro	Leu	Ser	Asp	Ile	Lys	Val	Lys	Val	Gln	Ser	Ser	Phe	Met	Val	Ser
	195						200					205			
Leu	Gly	Val	Ser	Glu	Arg	Ala	Glu	Tyr	His	Gly	Lys	Asn	His	Ser	Arg
	210					215					220				
Thr	Phe	Pro	His	Gly	Asn	Asn	His	Ser	Phe	Ser	Thr	Met	His	Pro	Arg
225					230					235					240
Asn	Lys	Met	Pro	Tyr	Ile	Gln	Asn	Leu	Ser	Ser	Leu	Pro	Thr	Arg	Thr
				245					250					255	
Glu	Leu	Arg	Thr	Thr	Gly	Val	Phe	Gly	His	Leu	Gly	Gly	Arg	Leu	Val
			260					265					270		
Met	Pro	Asn	Thr	Gly	Val	Ser	Leu	Leu	Ile	Pro	His	Gly	Ala	Ile	Pro
		275					280					285			
Glu	Glu	Asn	Ser	Trp	Glu	Ile	Tyr	Met	Ser	Ile	Asn	Gln	Gly	Glu	Pro
	290					295					300				
Ser	Glu	Asn	Pro	Ala	Asn	Lys	Gly	Ser	Asn	Ser	Leu	Leu	Lys	Asn	Thr
305					310				315						320
Tyr	Ala	Ile	Gly	Gly	Lys	Ile	Ser	Arg	His	Leu	Gly	Ser	Ser	Arg	
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<210> 21
 <211> 999
 <212> DNA
 <213> homo sapiens

<400> 21

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cggatccggg	agtgcacagc	accacccccg	agaaatgggg	gcaaattctg	tgaagggtcta	180
agccaggaat	ctgaaaactg	cacagatggt	ctttgcatcc	tagataaaaa	acctcttcat	240
gaaataaaac	cccaaagcat	tgagaatgcc	agcgacattg	ctttgtactc	gggcttgggt	300
gctgccgtcg	tggccgttgc	agtcctggtc	attggtgtca	ccctttacag	acggagccag	360
agtgactatg	gcgtggacgt	cattgactct	tctgcattga	cagggtggctt	ccagaccttc	420
aacttcaaaa	cagtcctgca	aggtaactcc	ctgctcctga	attctgccat	gcagccagat	480
ctgacagtga	gccggacata	cagcggaccc	atctgtctgc	aggacctctt	ggacaaggag	540
ctcatgacag	agtcctcact	ctttaacctt	ttgtcggaca	tcaaagtga	agtccagagc	600
tcgttcatgg	tttcctggg	agtgctctgag	agagctgagt	accacggcaa	gaatcattcc	660
aggacttttc	cccatggaaa	caaccacagc	tttagtacia	tgcattccag	aaataaaatg	720
ccctacatcc	aaaatctgtc	atcactcccc	acaaggacag	aactgaggac	aactgggtgtc	780
tttggccatt	taggggggcg	cttagtaatg	ccaaatacag	gggtgagctt	actcatacca	840
cacggtgcc	tcccagagga	gaattcttgg	gagatttata	tgtccatcaa	ccaaggtgaa	900
cccagtga	atccagcaaa	caaaggatca	aatagcttgt	tgaagaacac	atatgccatt	960
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<210> 22
 <211> 332
 <212> PRT

<213> homo sapiens

<400> 22

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          20           25           30
Cys Ser Pro Glu Cys Glu His Leu Arg Ile Arg Glu Cys Thr Ala Pro
          35           40           45
Pro Pro Arg Asn Gly Gly Lys Phe Cys Glu Gly Leu Ser Gln Glu Ser
          50           55           60
Glu Asn Cys Thr Asp Gly Leu Cys Ile Leu Asp Lys Lys Pro Leu His
65           70           75           80
Glu Ile Lys Pro Gln Ser Ile Glu Asn Ala Ser Asp Ile Ala Leu Tyr
          85           90           95
Ser Gly Leu Gly Ala Ala Val Val Ala Val Ala Val Leu Val Ile Gly
          100          105          110
Val Thr Leu Tyr Arg Arg Ser Gln Ser Asp Tyr Gly Val Asp Val Ile
          115          120          125
Asp Ser Ser Ala Leu Thr Gly Gly Phe Gln Thr Phe Asn Phe Lys Thr
          130          135          140
Val Arg Gln Gly Asn Ser Leu Leu Leu Asn Ser Ala Met Gln Pro Asp
          145          150          155          160
Leu Thr Val Ser Arg Thr Tyr Ser Gly Pro Ile Cys Leu Gln Asp Pro
          165          170          175
Leu Asp Lys Glu Leu Met Thr Glu Ser Ser Leu Phe Asn Pro Leu Ser
          180          185          190
Asp Ile Lys Val Lys Val Gln Ser Ser Phe Met Val Ser Leu Gly Val
          195          200          205
Ser Glu Arg Ala Glu Tyr His Gly Lys Asn His Ser Arg Thr Phe Pro
          210          215          220
His Gly Asn Asn His Ser Phe Ser Thr Met His Pro Arg Asn Lys Met
          225          230          235          240
Pro Tyr Ile Gln Asn Leu Ser Ser Leu Pro Thr Arg Thr Glu Leu Arg
          245          250          255
Thr Thr Gly Val Phe Gly His Leu Gly Gly Arg Leu Val Met Pro Asn
          260          265          270
Thr Gly Val Ser Leu Leu Ile Pro His Gly Ala Ile Pro Glu Glu Asn
          275          280          285
Ser Trp Glu Ile Tyr Met Ser Ile Asn Gln Gly Glu Pro Ser Glu Asn
          290          295          300
Pro Ala Asn Lys Gly Ser Asn Ser Leu Leu Lys Asn Thr Tyr Ala Ile
          305          310          315          320
Gly Gly Lys Ile Ser Arg His Leu Gly Ser Ser Arg
          325          330
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<210> 23

<211> 966

<212> DNA

<213> homo sapiens

<400> 23

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cggatccggg agtgcacagc accacccccg agaaaatggg gcaaattctg tgaaggtcta      180
agccaggaat ctgaaaactg cacagatggt ctttgcattc taggcattga gaatgccagc      240
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gacattgctt	tgtactcggg	cttgggtgct	gccgtcgtgg	ccgttgcagt	cctgggtcatt	300
ggtgtcaccc	tttacagacg	gagccagagt	gactatggcg	tggacgtcat	tgactcttct	360
gcattgacag	gtgggttcca	gaccttcaac	ttcaaaacag	tccgtcaagg	taactccctg	420
ctcctgaatt	ctgccatgca	gccagatctg	acagtgagcc	ggacatacag	cggacccatc	480
tgtctgcagg	accctctgga	caaggagctc	atgacagagt	cctcactctt	taaccctttg	540
tcggacatca	aagtgaaagt	ccagagctcg	ttcatggttt	ccctggggagt	gtctgagaga	600
gctgagtacc	acggcaagaa	tcattccagg	acttttcccc	atggaaacaa	ccacagcttt	660
agtacaatgc	atcccagaaa	taaaatgccc	tacatccaaa	atctgtcatc	actccccaca	720
aggacagaac	tgaggacaac	tggtgtcttt	ggccatttag	gggggcgctt	agtaatgcc	780
aatacagggg	tgagcttact	cataccacac	ggtgccatcc	cagaggagaa	ttcttgggag	840
atttatatgt	ccatcaacca	aggtgaaccc	agtgaaaatc	cagcaaacaa	aggatcaa	900
agcttggtga	agaacacata	tgccattggg	ggaaaaataa	gcagacatct	gggttcttct	960
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<210> 24

<211> 321

<212> PRT

<213> homo sapiens

<400> 24

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Val	Val	Tyr	Val	Asp	Gly	Ser	Trp	Glu	Val	Trp	Ser	Glu	Trp	Ser	Val
			20					25				30			
Cys	Ser	Pro	Glu	Cys	Glu	His	Leu	Arg	Ile	Arg	Glu	Cys	Thr	Ala	Pro
		35					40					45			
Pro	Pro	Arg	Asn	Gly	Gly	Lys	Phe	Cys	Glu	Gly	Leu	Ser	Gln	Glu	Ser
	50					55					60				
Glu	Asn	Cys	Thr	Asp	Gly	Leu	Cys	Ile	Leu	Gly	Ile	Glu	Asn	Ala	Ser
65				70					75					80	
Asp	Ile	Ala	Leu	Tyr	Ser	Gly	Leu	Gly	Ala	Ala	Val	Val	Ala	Val	Ala
			85					90					95		
Val	Leu	Val	Ile	Gly	Val	Thr	Leu	Tyr	Arg	Arg	Ser	Gln	Ser	Asp	Tyr
		100					105					110			
Gly	Val	Asp	Val	Ile	Asp	Ser	Ser	Ala	Leu	Thr	Gly	Gly	Phe	Gln	Thr
	115					120					125				
Phe	Asn	Phe	Lys	Thr	Val	Arg	Gln	Gly	Asn	Ser	Leu	Leu	Leu	Asn	Ser
130					135						140				
Ala	Met	Gln	Pro	Asp	Leu	Thr	Val	Ser	Arg	Thr	Tyr	Ser	Gly	Pro	Ile
145				150					155						160
Cys	Leu	Gln	Asp	Pro	Leu	Asp	Lys	Glu	Leu	Met	Thr	Glu	Ser	Ser	Leu
			165					170					175		
Phe	Asn	Pro	Leu	Ser	Asp	Ile	Lys	Val	Lys	Val	Gln	Ser	Ser	Phe	Met
		180					185					190			
Val	Ser	Leu	Gly	Val	Ser	Glu	Arg	Ala	Glu	Tyr	His	Gly	Lys	Asn	His
	195					200						205			
Ser	Arg	Thr	Phe	Pro	His	Gly	Asn	Asn	His	Ser	Phe	Ser	Thr	Met	His
210					215						220				
Pro	Arg	Asn	Lys	Met	Pro	Tyr	Ile	Gln	Asn	Leu	Ser	Ser	Leu	Pro	Thr
225				230					235					240	
Arg	Thr	Glu	Leu	Arg	Thr	Thr	Gly	Val	Phe	Gly	His	Leu	Gly	Gly	Arg
			245				250						255		
Leu	Val	Met	Pro	Asn	Thr	Gly	Val	Ser	Leu	Leu	Ile	Pro	His	Gly	Ala
		260					265					270			
Ile	Pro	Glu	Asn	Ser	Trp	Glu	Ile	Tyr	Met	Ser	Ile	Asn	Gln	Gly	
	275					280					285				

Glu Pro Ser Glu Asn Pro Ala Asn Lys Gly Ser Asn Ser Leu Leu Lys
 290 295 300
 Asn Thr Tyr Ala Ile Gly Gly Lys Ile Ser Arg His Leu Gly Ser Ser
 305 310 315 320
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<210> 25
 <211> 2043
 <212> DNA
 <213> homo sapiens

<400> 25
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 cggatccggg agtgacacagc accacccccg agaaatgggg gcaaattctg tgaaggtcta 180
 agccaggaat ctgaaaactg cacagatggc ctttgcaccc tagataaaaa acctcttcat 240
 gaaataaaac cccaaagcat tgagaatgcc agcgacattg ctttgtactc gggcttgggt 300
 gctgccgtcg tggccgttgc agtcctgggc attggtgtca ccctttacag acggagccag 360
 agtgactatg gcgtggacgt cattgactct tctgcattga cagggtggctt ccagaccttc 420
 aacttcaaaa cagtcctgca agccaagaat atcatggaac taatgataca agaaaaatcc 480
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 tacagcggac ccatctgtct gcaggacctt ctggacaagg agctcatgac agagtccctca 600
 ctctttaacc ctttgtcggg catcaaagtg aaagtccaga gctcgttcat ggtttccctg 660
 ggagtgtctg agagagctga gtaccacggc aagaatcatt ccaggacttt tccccatgga 720
 aacaaccaca gcttttagtac aatgcatccc agaaataaaa tgccctacat ccaaaatctg 780
 tcatactacc ccacaaggac agaactgagg acaactgggtg tctttggcca tttagggggg 840
 cgcttagtaa tgccaaatac aggggtgagc ttactcatac cacacggtgc catcccagag 900
 gagaattctt gggagattta tatgtccatc aaccaagggtg aaccagcctt ccagtcagat 960
 ggctctgagg tgctcctgag tctgaagtc acctgtgggc ctccagacat gatcgtcacc 1020
 actccctttg cattgacctt cccgcactgt gcagatgtca gttctgagca ttggaatatc 1080
 catttaaaga agaggacaca gcagggcaaa tgggaggaag tgatgtcagt ggaagatgaa 1140
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 tag 2043

<210> 26
 <211> 680
 <212> PRT
 <213> homo sapiens

<400> 26
 Met Ala Ala Asn Ile Val Ala Lys Arg Arg Ser Leu Ser Ala Thr Val

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			20					25				30			
Cys	Ser	Pro	Glu	Cys	Glu	His	Leu	Arg	Ile	Arg	Glu	Cys	Thr	Ala	Pro
		35					40				45				
Pro	Pro	Arg	Asn	Gly	Gly	Lys	Phe	Cys	Glu	Gly	Leu	Ser	Gln	Glu	Ser
	50					55					60				
Glu	Asn	Cys	Thr	Asp	Gly	Leu	Cys	Ile	Leu	Asp	Lys	Lys	Pro	Leu	His
65					70					75				80	
Glu	Ile	Lys	Pro	Gln	Ser	Ile	Glu	Asn	Ala	Ser	Asp	Ile	Ala	Leu	Tyr
				85				90						95	
Ser	Gly	Leu	Gly	Ala	Ala	Val	Val	Ala	Val	Ala	Val	Leu	Val	Ile	Gly
			100					105					110		
Val	Thr	Leu	Tyr	Arg	Arg	Ser	Gln	Ser	Asp	Tyr	Gly	Val	Asp	Val	Ile
	115						120					125			
Asp	Ser	Ser	Ala	Leu	Thr	Gly	Gly	Phe	Gln	Thr	Phe	Asn	Phe	Lys	Thr
	130					135					140				
Val	Arg	Gln	Ala	Lys	Asn	Ile	Met	Glu	Leu	Met	Ile	Gln	Glu	Lys	Ser
145					150					155					160
Phe	Gly	Asn	Ser	Leu	Leu	Asn	Ser	Ala	Met	Gln	Pro	Asp	Leu	Thr	
				165				170						175	
Val	Ser	Arg	Thr	Tyr	Ser	Gly	Pro	Ile	Cys	Leu	Gln	Asp	Pro	Leu	Asp
			180					185					190		
Lys	Glu	Leu	Met	Thr	Glu	Ser	Ser	Leu	Phe	Asn	Pro	Leu	Ser	Asp	Ile
	195						200					205			
Lys	Val	Lys	Val	Gln	Ser	Ser	Phe	Met	Val	Ser	Leu	Gly	Val	Ser	Glu
	210					215					220				
Arg	Ala	Glu	Tyr	His	Gly	Lys	Asn	His	Ser	Arg	Thr	Phe	Pro	His	Gly
225					230					235					240
Asn	Asn	His	Ser	Phe	Ser	Thr	Met	His	Pro	Arg	Asn	Lys	Met	Pro	Tyr
				245					250					255	
Ile	Gln	Asn	Leu	Ser	Ser	Leu	Pro	Thr	Arg	Thr	Glu	Leu	Arg	Thr	Thr
			260					265					270		
Gly	Val	Phe	Gly	His	Leu	Gly	Gly	Arg	Leu	Val	Met	Pro	Asn	Thr	Gly
	275					280						285			
Val	Ser	Leu	Leu	Ile	Pro	His	Gly	Ala	Ile	Pro	Glu	Glu	Asn	Ser	Trp
	290					295					300				
Glu	Ile	Tyr	Met	Ser	Ile	Asn	Gln	Gly	Glu	Pro	Ser	Leu	Gln	Ser	Asp
305					310					315					320
Gly	Ser	Glu	Val	Leu	Leu	Ser	Pro	Glu	Val	Thr	Cys	Gly	Pro	Pro	Asp
				325					330					335	
Met	Ile	Val	Thr	Thr	Pro	Phe	Ala	Leu	Thr	Ile	Pro	His	Cys	Ala	Asp
			340					345					350		
Val	Ser	Ser	Glu	His	Trp	Asn	Ile	His	Leu	Lys	Lys	Arg	Thr	Gln	Gln
		355				360						365			
Gly	Lys	Trp	Glu	Glu	Val	Met	Ser	Val	Glu	Asp	Glu	Ser	Thr	Ser	Cys
	370					375					380				
Tyr	Cys	Leu	Leu	Asp	Pro	Phe	Ala	Cys	His	Val	Leu	Leu	Asp	Ser	Phe
385					390					395					400
Gly	Thr	Tyr	Ala	Leu	Thr	Gly	Glu	Pro	Ile	Thr	Asp	Cys	Ala	Val	Lys
				405					410					415	
Gln	Leu	Lys	Val	Ala	Val	Phe	Gly	Cys	Met	Ser	Cys	Asn	Ser	Leu	Asp
			420					425					430		
Tyr	Asn	Leu	Arg	Val	Tyr	Cys	Val	Asp	Asn	Thr	Pro	Cys	Ala	Phe	Gln
	435					440						445			
Glu	Val	Val	Ser	Asp	Glu	Arg	His	Gln	Gly	Gly	Gln	Leu	Leu	Glu	Glu

450		455		460
Pro Lys Leu Leu His	Phe Lys Gly Asn Thr	Phe Ser Leu Gln Ile Ser		
465	470	475		480
Val Leu Asp Ile Pro	Phe Leu Trp Arg Ile	Lys Pro Phe Thr Ala		
	485	490		495
Cys Gln Glu Val Pro	Phe Ser Arg Val Trp Cys	Ser Asn Arg Gln Pro		
	500	505		510
Leu His Cys Ala Phe	Ser Leu Glu Arg Tyr Thr	Pro Thr Thr Thr Gln		
	515	520		525
Leu Ser Cys Lys Ile	Cys Ile Arg Gln Leu Lys	Gly His Glu Gln Ile		
	530	535		540
Leu Gln Val Gln Thr	Ser Ile Leu Glu Ser Glu	Arg Glu Thr Ile Thr		
545	550	555		560
Phe Phe Ala Gln Glu	Asp Ser Thr Phe Pro	Ala Gln Thr Gly Pro Lys		
	565	570		575
Ala Phe Lys Ile Pro	Tyr Ser Ile Arg Gln	Arg Ile Cys Ala Thr Phe		
	580	585		590
Asp Thr Pro Asn Ala	Lys Gly Lys Asp Trp	Gln Met Leu Ala Gln Lys		
	595	600		605
Asn Ser Ile Asn Arg	Asn Leu Ser Tyr Phe	Ala Thr Gln Ser Ser Pro		
	610	615		620
Ser Ala Val Ile Leu	Asn Leu Trp Glu Ala	Arg His Gln His Asp Gly		
625	630	635		640
Asp Leu Asp Ser Leu	Ala Cys Ala Leu Glu	Glu Ile Gly Arg Thr His		
	645	650		655
Thr Lys Leu Ser Asn	Ile Ser Glu Ser Gln	Leu Asp Glu Ala Asp Phe		
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cggatccggg agtgcacagc accacccccg agaaatgggg gcaaattctg tgaaggtcta	180
agccaggaat ctgaaaactg cacagatggt ctttgcattcc taggcattga gaatgccagc	240
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ggtgtcaccc tttacagacg gagccagagt gactatggcg tggacgtcat tgactcttct	360
gcattgacag gtggcttcca gaccttcaac ttcaaaacag tccgtcaagc caagaatatt	420
atggaactaa tgatacaaga aaaatccttt ggtaactccc tgtcctgaa ttctgccatg	480
cagccagatc tgacagttag cggacatac agcggaccca tctgtctgca ggaccctctg	540
gacaaggagc tcatgacaga gtctctactc tttaaccctt tgtcggacat caaagtgaaa	600
gtccagagct cgttcatggt ttccctggga gtgtctgaga gagctgagta ccacggcaag	660
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aataaaatgc cctacatcca aaatctgtca tcaactccca caaggacaga actgaggaca	780
actggtgtct ttggccattt agggggggcg ttagtaatgc caaatacagg ggtgagctta	840
ctcataccac acggtgccat cccagaggag aattcttggg agatttatat gtccatcaac	900
caaggtgaac ccagcctcca gtcagatggc tctgaggtgc tcctgagtc tgaagtcacc	960
tgtggctctc cagacatgat cgtcaccact ccctttgcat tgaccatccc gactgtgca	1020
gatgtcagtt ctgagcattg gaatatccat ttaaagaaga ggacacagca gggcaaattg	1080
gaggaagtga tgtcagtggg agatgaatct acatcctgtt actgcctttt ggaccctttt	1140
gcgtgtcatg tgctcctgga cagcttttggg acctatgcgc tcaactggaga gccaatcaca	1200

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gattacaact	tgagagttta	ctgtgtggac	aatacccctt	gtgcatttca	ggaagtgggt	1320
tcagatgaaa	ggcatcaagg	tggaagctc	ctggaagaac	caaaattgct	gcatttcaaa	1380
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aaaccattca	ctgcctgcc	ggaagtcccg	ttctcccgcg	tgtggtgcag	taaccggcag	1500
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aacaggaatt	tatcttattt	cgctacacaa	agtagcccat	ctgctgtcat	tttgaacctg	1860
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<210> 28

<211> 669

<212> PRT

<213> homo sapiens

<400> 28

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			20					25				30			
Cys	Ser	Pro	Glu	Cys	Glu	His	Leu	Arg	Ile	Arg	Glu	Cys	Thr	Ala	Pro
		35					40				45				
Pro	Pro	Arg	Asn	Gly	Gly	Lys	Phe	Cys	Glu	Gly	Leu	Ser	Gln	Glu	Ser
	50					55					60				
Glu	Asn	Cys	Thr	Asp	Gly	Leu	Cys	Ile	Leu	Gly	Ile	Glu	Asn	Ala	Ser
65					70					75				80	
Asp	Ile	Ala	Leu	Tyr	Ser	Gly	Leu	Gly	Ala	Ala	Val	Val	Ala	Val	Ala
			85						90				95		
Val	Leu	Val	Ile	Gly	Val	Thr	Leu	Tyr	Arg	Arg	Ser	Gln	Ser	Asp	Tyr
		100						105				110			
Gly	Val	Asp	Val	Ile	Asp	Ser	Ser	Ala	Leu	Thr	Gly	Gly	Phe	Gln	Thr
	115					120					125				
Phe	Asn	Phe	Lys	Thr	Val	Arg	Gln	Ala	Lys	Asn	Ile	Met	Glu	Leu	Met
	130					135					140				
Ile	Gln	Glu	Lys	Ser	Phe	Gly	Asn	Ser	Leu	Leu	Leu	Asn	Ser	Ala	Met
145					150					155				160	
Gln	Pro	Asp	Leu	Thr	Val	Ser	Arg	Thr	Tyr	Ser	Gly	Pro	Ile	Cys	Leu
			165					170				175			
Gln	Asp	Pro	Leu	Asp	Lys	Glu	Leu	Met	Thr	Glu	Ser	Ser	Leu	Phe	Asn
		180						185				190			
Pro	Leu	Ser	Asp	Ile	Lys	Val	Lys	Val	Gln	Ser	Ser	Phe	Met	Val	Ser
	195					200						205			
Leu	Gly	Val	Ser	Glu	Arg	Ala	Glu	Tyr	His	Gly	Lys	Asn	His	Ser	Arg
	210					215					220				
Thr	Phe	Pro	His	Gly	Asn	Asn	His	Ser	Phe	Ser	Thr	Met	His	Pro	Arg
225					230					235				240	
Asn	Lys	Met	Pro	Tyr	Ile	Gln	Asn	Leu	Ser	Ser	Leu	Pro	Thr	Arg	Thr
			245					250						255	
Glu	Leu	Arg	Thr	Thr	Gly	Val	Phe	Gly	His	Leu	Gly	Gly	Arg	Leu	Val
		260						265					270		
Met	Pro	Asn	Thr	Gly	Val	Ser	Leu	Leu	Ile	Pro	His	Gly	Ala	Ile	Pro

275					280					285					
Glu	Glu	Asn	Ser	Trp	Glu	Ile	Tyr	Met	Ser	Ile	Asn	Gln	Gly	Glu	Pro
290					295					300					
Ser	Leu	Gln	Ser	Asp	Gly	Ser	Glu	Val	Leu	Leu	Ser	Pro	Glu	Val	Thr
305					310					315					
Cys	Gly	Pro	Pro	Asp	Met	Ile	Val	Thr	Thr	Pro	Phe	Ala	Leu	Thr	Ile
325					330					335					
Pro	His	Cys	Ala	Asp	Val	Ser	Ser	Glu	His	Trp	Asn	Ile	His	Leu	Lys
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Lys	Arg	Thr	Gln	Gln	Gly	Lys	Trp	Glu	Glu	Val	Met	Ser	Val	Glu	Asp
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Glu	Ser	Thr	Ser	Cys	Tyr	Cys	Leu	Leu	Asp	Pro	Phe	Ala	Cys	His	Val
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Leu	Leu	Asp	Ser	Phe	Gly	Thr	Tyr	Ala	Leu	Thr	Gly	Glu	Pro	Ile	Thr
385					390					395					
Asp	Cys	Ala	Val	Lys	Gln	Leu	Lys	Val	Ala	Val	Phe	Gly	Cys	Met	Ser
405					410					415					
Cys	Asn	Ser	Leu	Asp	Tyr	Asn	Leu	Arg	Val	Tyr	Cys	Val	Asp	Asn	Thr
420					425					430					
Pro	Cys	Ala	Phe	Gln	Glu	Val	Val	Ser	Asp	Glu	Arg	His	Gln	Gly	Gly
435					440					445					
Gln	Leu	Leu	Glu	Glu	Pro	Lys	Leu	Leu	His	Phe	Lys	Gly	Asn	Thr	Phe
450					455					460					
Ser	Leu	Gln	Ile	Ser	Val	Leu	Asp	Ile	Pro	Pro	Phe	Leu	Trp	Arg	Ile
465					470					475					
Lys	Pro	Phe	Thr	Ala	Cys	Gln	Glu	Val	Pro	Phe	Ser	Arg	Val	Trp	Cys
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Ser	Asn	Arg	Gln	Pro	Leu	His	Cys	Ala	Phe	Ser	Leu	Glu	Arg	Tyr	Thr
500					505					510					
Pro	Thr	Thr	Thr	Gln	Leu	Ser	Cys	Lys	Ile	Cys	Ile	Arg	Gln	Leu	Lys
515					520					525					
Gly	His	Glu	Gln	Ile	Leu	Gln	Val	Gln	Thr	Ser	Ile	Leu	Glu	Ser	Glu
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Arg	Glu	Thr	Ile	Thr	Phe	Ala	Gln	Glu	Asp	Ser	Thr	Phe	Pro	Ala	
545					550					555					
Gln	Thr	Gly	Pro	Lys	Ala	Phe	Lys	Ile	Pro	Tyr	Ser	Ile	Arg	Gln	Arg
565					570					575					
Ile	Cys	Ala	Thr	Phe	Asp	Thr	Pro	Asn	Ala	Lys	Gly	Lys	Asp	Trp	Gln
580					585					590					
Met	Leu	Ala	Gln	Lys	Asn	Ser	Ile	Asn	Arg	Asn	Leu	Ser	Tyr	Phe	Ala
595					600					605					
Thr	Gln	Ser	Ser	Pro	Ser	Ala	Val	Ile	Leu	Asn	Leu	Trp	Glu	Ala	Arg
610					615					620					
His	Gln	His	Asp	Gly	Asp	Leu	Asp	Ser	Leu	Ala	Cys	Ala	Leu	Glu	Glu
625					630					635					
Ile	Gly	Arg	Thr	His	Thr	Lys	Leu	Ser	Asn	Ile	Ser	Glu	Ser	Gln	Leu
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Asp	Glu	Ala	Asp	Phe	Asn	Tyr	Ser	Arg	Gln	Asn	Gly	Leu			
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<210> 29

<211> 2001

<212> DNA

<213> homo sapiens

<400> 29

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gaaataaaac	cccaaagcat	tgagaatgcc	agcgacattg	ctttgtactc	gggcttgggt	300
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 <213> homo sapiens

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 35 40 45
 Pro Pro Arg Asn Gly Gly Lys Phe Cys Glu Gly Leu Ser Gln Glu Ser
 50 55 60
 Glu Asn Cys Thr Asp Gly Leu Cys Ile Leu Asp Lys Lys Pro Leu His
 65 70 75 80
 Glu Ile Lys Pro Gln Ser Ile Glu Asn Ala Ser Asp Ile Ala Leu Tyr
 85 90 95
 Ser Gly Leu Gly Ala Ala Val Val Ala Val Ala Val Leu Val Ile Gly
 100 105 110
 Val Thr Leu Tyr Arg Arg Ser Gln Ser Asp Tyr Gly Val Asp Val Ile

115	120	125
Asp Ser Ser Ala Leu Thr Gly Gly Phe Gln Thr Phe Asn Phe Lys Thr		
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Val Arg Gln Gly Asn Ser Leu Leu Leu Asn Ser Ala Met Gln Pro Asp		
145	150	155
Leu Thr Val Ser Arg Thr Tyr Ser Gly Pro Ile Cys Leu Gln Asp Pro		
165	170	175
Leu Asp Lys Glu Leu Met Thr Glu Ser Ser Leu Phe Asn Pro Leu Ser		
180	185	190
Asp Ile Lys Val Lys Val Gln Ser Ser Phe Met Val Ser Leu Gly Val		
195	200	205
Ser Glu Arg Ala Glu Tyr His Gly Lys Asn His Ser Arg Thr Phe Pro		
210	215	220
His Gly Asn Asn His Ser Phe Ser Thr Met His Pro Arg Asn Lys Met		
225	230	235
Pro Tyr Ile Gln Asn Leu Ser Ser Leu Pro Thr Arg Thr Glu Leu Arg		
245	250	255
Thr Thr Gly Val Phe Gly His Leu Gly Gly Arg Leu Val Met Pro Asn		
260	265	270
Thr Gly Val Ser Leu Leu Ile Pro His Gly Ala Ile Pro Glu Glu Asn		
275	280	285
Ser Trp Glu Ile Tyr Met Ser Ile Asn Gln Gly Glu Pro Ser Leu Gln		
290	295	300
Ser Asp Gly Ser Glu Val Leu Leu Ser Pro Glu Val Thr Cys Gly Pro		
305	310	315
Pro Asp Met Ile Val Thr Thr Pro Phe Ala Leu Thr Ile Pro His Cys		
325	330	335
Ala Asp Val Ser Ser Glu His Trp Asn Ile His Leu Lys Lys Arg Thr		
340	345	350
Gln Gln Gly Lys Trp Glu Glu Val Met Ser Val Glu Asp Glu Ser Thr		
355	360	365
Ser Cys Tyr Cys Leu Leu Asp Pro Phe Ala Cys His Val Leu Leu Asp		
370	375	380
Ser Phe Gly Thr Tyr Ala Leu Thr Gly Glu Pro Ile Thr Asp Cys Ala		
385	390	395
Val Lys Gln Leu Lys Val Ala Val Phe Gly Cys Met Ser Cys Asn Ser		
405	410	415
Leu Asp Tyr Asn Leu Arg Val Tyr Cys Val Asp Asn Thr Pro Cys Ala		
420	425	430
Phe Gln Glu Val Val Ser Asp Glu Arg His Gln Gly Gly Gln Leu Leu		
435	440	445
Glu Glu Pro Lys Leu Leu His Phe Lys Gly Asn Thr Phe Ser Leu Gln		
450	455	460
Ile Ser Val Leu Asp Ile Pro Pro Phe Leu Trp Arg Ile Lys Pro Phe		
465	470	475
Thr Ala Cys Gln Glu Val Pro Phe Ser Arg Val Trp Cys Ser Asn Arg		
485	490	495
Gln Pro Leu His Cys Ala Phe Ser Leu Glu Arg Tyr Thr Pro Thr Thr		
500	505	510
Thr Gln Leu Ser Cys Lys Ile Cys Ile Arg Gln Leu Lys Gly His Glu		
515	520	525
Gln Ile Leu Gln Val Gln Thr Ser Ile Leu Glu Ser Glu Arg Glu Thr		
530	535	540
Ile Thr Phe Phe Ala Gln Glu Asp Ser Thr Phe Pro Ala Gln Thr Gly		
545	550	555
Pro Lys Ala Phe Lys Ile Pro Tyr Ser Ile Arg Gln Arg Ile Cys Ala		

34

<212> PRT

<213> homo sapiens

<400> 32

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			20					25					30		
Cys	Ser	Pro	Glu	Cys	Glu	His	Leu	Arg	Ile	Arg	Glu	Cys	Thr	Ala	Pro
		35					40					45			
Pro	Pro	Arg	Asn	Gly	Gly	Lys	Phe	Cys	Glu	Gly	Leu	Ser	Gln	Glu	Ser
	50					55					60				
Glu	Asn	Cys	Thr	Asp	Gly	Leu	Cys	Ile	Leu	Gly	Ile	Glu	Asn	Ala	Ser
65					70					75					80
Asp	Ile	Ala	Leu	Tyr	Ser	Gly	Leu	Gly	Ala	Ala	Val	Val	Ala	Val	Ala
			85						90					95	
Val	Leu	Val	Ile	Gly	Val	Thr	Leu	Tyr	Arg	Arg	Ser	Gln	Ser	Asp	Tyr
			100					105					110		
Gly	Val	Asp	Val	Ile	Asp	Ser	Ser	Ala	Leu	Thr	Gly	Gly	Phe	Gln	Thr
		115					120					125			
Phe	Asn	Phe	Lys	Thr	Val	Arg	Gln	Gly	Asn	Ser	Leu	Leu	Leu	Asn	Ser
	130					135					140				
Ala	Met	Gln	Pro	Asp	Leu	Thr	Val	Ser	Arg	Thr	Tyr	Ser	Gly	Pro	Ile
145					150					155					160
Cys	Leu	Gln	Asp	Pro	Leu	Asp	Lys	Glu	Leu	Met	Thr	Glu	Ser	Ser	Leu
			165					170						175	
Phe	Asn	Pro	Leu	Ser	Asp	Ile	Lys	Val	Lys	Val	Gln	Ser	Ser	Phe	Met
		180					185					190			
Val	Ser	Leu	Gly	Val	Ser	Glu	Arg	Ala	Glu	Tyr	His	Gly	Lys	Asn	His
	195						200					205			
Ser	Arg	Thr	Phe	Pro	His	Gly	Asn	Asn	His	Ser	Phe	Ser	Thr	Met	His
	210					215					220				
Pro	Arg	Asn	Lys	Met	Pro	Tyr	Ile	Gln	Asn	Leu	Ser	Ser	Leu	Pro	Thr
225					230					235					240
Arg	Thr	Glu	Leu	Arg	Thr	Thr	Gly	Val	Phe	Gly	His	Leu	Gly	Gly	Arg
			245						250					255	
Leu	Val	Met	Pro	Asn	Thr	Gly	Val	Ser	Leu	Leu	Ile	Pro	His	Gly	Ala
		260					265						270		
Ile	Pro	Glu	Glu	Asn	Ser	Trp	Glu	Ile	Tyr	Met	Ser	Ile	Asn	Gln	Gly
	275						280					285			
Glu	Pro	Ser	Leu	Gln	Ser	Asp	Gly	Ser	Glu	Val	Leu	Leu	Ser	Pro	Glu
	290					295					300				
Val	Thr	Cys	Gly	Pro	Pro	Asp	Met	Ile	Val	Thr	Thr	Pro	Phe	Ala	Leu
305					310					315					320
Thr	Ile	Pro	His	Cys	Ala	Asp	Val	Ser	Ser	Glu	His	Trp	Asn	Ile	His
			325						330					335	
Leu	Lys	Lys	Arg	Thr	Gln	Gln	Gly	Lys	Trp	Glu	Glu	Val	Met	Ser	Val
		340						345					350		
Glu	Asp	Glu	Ser	Thr	Ser	Cys	Tyr	Cys	Leu	Leu	Asp	Pro	Phe	Ala	Cys
	355						360					365			
His	Val	Leu	Leu	Asp	Ser	Phe	Gly	Thr	Tyr	Ala	Leu	Thr	Gly	Glu	Pro
	370					375					380				
Ile	Thr	Asp	Cys	Ala	Val	Lys	Gln	Leu	Lys	Val	Ala	Val	Phe	Gly	Cys
385					390					395					400
Met	Ser	Cys	Asn	Ser	Leu	Asp	Tyr	Asn	Leu	Arg	Val	Tyr	Cys	Val	Asp
			405						410					415	

Asn	Thr	Pro	Cys	Ala	Phe	Gln	Glu	Val	Val	Ser	Asp	Glu	Arg	His	Gln	
			420					425					430			
Gly	Gly	Gln	Leu	Leu	Glu	Glu	Pro	Lys	Leu	Leu	His	Phe	Lys	Gly	Asn	
		435					440					445				
Thr	Phe	Ser	Leu	Gln	Ile	Ser	Val	Leu	Asp	Ile	Pro	Pro	Phe	Leu	Trp	
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